

REMARKS

Claims 54-59, 61-66, and 69-86 are currently pending. The three independent claims – 54, 72, and 76 - have been amended. The amendment is supported by Applicant's original disclosure, including Figure 4. Claims 80, 83, and 86 have been amended, the amendment of which is self-supporting. The amendment of claim 62 is supported by Applicant's original disclosure, including page 12, line 24, through page 13, line 12. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claims 54, 61-66, 71, 72, 75, 76, 78, 79, 81, 82, 84, and 85 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani, U.S. Patent No. 6,314,108, in view of Guilford, U.S. Patent No. 7,433,929.

There are three independent claims: 54, 72, and 76.

Claim 54 recites as follows:

A user content delivery method comprising: **at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time**, wherein the set of user content delivery preferences comprises a delivery cost constraint indicative of a maximum cost that a user is willing to pay to have the user content delivered; receiving a request from a wireless terminal connected to the network, the request directed to the user content for which user content delivery preferences have been established; sourcing the user content in response to receiving the request; **at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal**; and scheduling delivery of the content from the agent to the terminal over the selected network.

Claim 72 recites as follows:

An apparatus comprising: **an agent, the agent comprising**: a memory storing a computer program configured to operate an agent in a network; and **a controller configured to execute the computer program to cause the apparatus at least to perform establishing a set of user content delivery preferences relating to user content to be delivered at a future time**, wherein the set of user content delivery preferences comprises a delivery cost constraint indicative of a maximum cost that a user is willing to pay to have the user content delivered; receiving a request from a wireless terminal connected to the network, the request

directed to the user content for which user content delivery preferences have been established; sourcing the user content in response to receiving the request; **selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal**; and scheduling delivery of the content from the agent to the terminal over the selected network.

Claim 76 recites as follows:

An apparatus comprising: a memory storing a computer program, wherein when executed the computer program is configured to perform operations, the operations comprising: **establishing, at an agent resident on a network element, a set of user content delivery preferences relating to user content to be delivered at a future time**, wherein the set of user content delivery preferences comprises a delivery cost constraint indicative of a maximum cost that a user is willing to pay to have the user content delivered; receiving a request from a wireless terminal connected to the network, the request directed to the user content for which user content delivery preferences have been established; sourcing the user content in response to receiving the request; **selecting, based on at least the delivery cost, by the agent, between at least two networks over which to deliver said user content from the agent to the terminal**; and scheduling delivery of the content from the agent to the wireless terminal over the selected wireless network.

The three independent claims recite, similarly or identically, as follows, in pertinent part:

“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”

The Patent Office asserted that subject matter of the three independent claims was made obvious by Ramasubramani in view of Guilford. The Patent Office relied on the following passages from Ramasubramani: column 6, lines 43-65, and column 15, lines 1-55. The Patent Office relied also on the following passages of Guilford: column 2, lines 17-25, column 3, lines 37-43, column 7, lines 1-32, column 10, lines 3-9 and 41-55, and column 15, line 61, through column 16, line 34.

Ramasubramani discloses as follows in the passages referenced above:

FIG. 3 is a block diagram of a multi-network gateway 300 according to

one embodiment of the invention. The multi-network gateway 300 is, for example, suitable for use as the multi-network gateway 214 illustrated in FIG. 2. Specifically, the multi-network gateway 300 assumes that the multi-network gateway is facilitating the coupling of three different carrier networks to the Internet. As illustrated in FIG. 2, the three carrier networks are referred to as carrier network A, carrier network B, and carrier network C.

The multi-network gateway 300 includes a push agent 302 and a pull agent 304. The push agent 302 and the pull agent 304 are in general agents or processing modules within the multi-network gateway 300 that serve to provide wireless communication devices with access to information from the Internet 216. The push agent 302 operates to "push" information content from the Internet to the wireless communication devices. The pull agent 304 operates to "pull" information content from the Internet 216 when requested by the wireless communication devices. The push agent 302 and pull agent 304 are coupled to the Internet 216 by an HTTP module 306. Also, the push agent 302 and the pull agent 304 are coupled to the carrier networks A, B and C by a wireless carrier interface 308.

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FIGS. 12A and 12B are flow diagrams of pull agent processing 1200 according to an embodiment of the invention. The pull agent processing 1200 is performed by the pull agent within the multi-network gateway. The pull agent processing 1200 initially begins with a decision block 1202 that determines whether a request has been received. If a request has not yet been received, the pull agent processing 1200 waits for the receipt of such request. Once a request has been received, the pull agent processing 1200 continues. The request that is received is normally a PDU from a wireless communication device.

Once the pull agent processing 1200 continues, the received PDU is associated 1204 with an appropriate airlink within the pull agent. The appropriate airlink is the airlink within the pull agent that is to receive the request (i.e., PDU) that has been received from the wireless carrier network associated with the wireless communication device. Next, the appropriate airlink will operate to form 1206 a package that includes the PDU, the appropriate airlink, and the source address. Then, the package is forwarded 1208 to the pull agent.

After receiving the package, the pull agent then stores 1210 the package in its session data. The session data is maintained by the pull agent to record state information associated with requests being processed by the pull agent. Next, the pull agent forms 1212 a HTTP request. The HTTP request is formed such that the information being requested by the wireless communication device is in fact requested from an application server on the Internet. The pull agent then sends 1214 the HTTP request

over the Internet.

After sending the HTTP request, the pull agent waits for a HTTP response from the Internet. Here, a decision block 1216 implements the waiting by determining whether a HTTP response has been received. As long as no HTTP response to the HTTP request has been received, the decision block 1216 causes the pull agent processing 1200 to await such a response. Once the HTTP response has been received, the pull agent processing 1200 operates to formulate 1218 a reply PDU. Here, the pull agent forms the reply PDU from the HTTP response. Then, the appropriate airlink is identified 1220 using the session data. The appropriate airlink for the reply PDU is obtained from the session data which associates the airlink with the original source address which now corresponds to the target address for the reply PDU. After the appropriate airlink is identified, the reply PDU is forwarded 1222 to the identified airlink within the pull agent. The identified airlink within the pull agent then sends 1224 the reply PDU to the target address. Here, by the airlink sending the reply PDU to the target address, the reply PDU is forwarded to the appropriate carrier network then on to the wireless communication device that originally requested the information it now receives in the reply PDU. Following block 1224 the pull agent processing 1200 is complete and ends.

Ramasubramani discloses a service provider in which a Network Gateway 602 provides access and retrieval of "information from the Internet 216 to the wireless communications devices 202, 204 and 206" (column 9, lines 10-21). Figure 7 shows the Network Gateway 602 as including a push agent and a pull agent. Ramasubramani discloses, in column 15, lines 1-55, the pull agent receives request through an airlink from a source (terminal device) and retrieves Internet content through the pull agent based on the airlink request. Thereupon, the pull agent establishes an airlink with a destination (the same terminal device) and sends the retrieved Internet content to the destination. There is no set of user content deliver preferences involved in sending the Internet content to the terminal device. The return airlink is determined based on data from the session.

Ramasubramani does not disclose or suggest **"at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time" and "at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal."** This is evident from the detail view in Figure 7 of network gateway 602 where each

of the push agent 702 and the pull agent 704 are seen to simply route signals to terminals 202, 204, 206 without selecting a network to route through.

Guilford discloses as follows in the passages referenced above:

Presently, there is no process or system for directing specific service requests to any network other than the network on which the wireless device is presently parked. Therefore, the present arrangement of wireless networks reduces the likelihood that a request for service from a wireless device will be processed by an optimal network. There is a need in the art for a system and method that directs wireless communication to the appropriate network for improved performance or cost benefits.

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Further, even in roaming scenarios, a roaming service provider having a roaming agreement with the home service provider may also have a plurality of different platforms available to roamers. Again, even in the roaming context, a roaming wireless device needs to be able to alter a communication link from one network resource to another within the portfolio of platforms offered by a roaming service provider.

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Thus, if one user is using a 3G network for low bandwidth services, and another user is on a 2G network and requests high bandwidth services, the present invention enables the service provider operators to swap the networks serving the users according to their service bandwidth requirements. An advantage of the invention includes empowering network carriers with the tools to direct network traffic based on the application used, or service requested, to the appropriate network. The invention is not limited to a wireless device establishing a communication link with only a single wireless network. Accordingly, given the examples discussed herein, a wireless device may use a first wireless network for voice communication, and if a service request is received by the first network involving data communication that will demand more bandwidth, the invention enables that service request to be accomplished via a second communication link with a second network that will more efficiently process the data communication request. Various factors or parameters are used when making the direction decision. These factors include different characteristics associated with the service request, such as: delay tolerance, intermittent service tolerance, minimum data rate needed, cost of service, business agreements, etc.

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Quality of service relates to a particular service request. For example, if a user subscribes to a service bucket (collection of services), he or she probably would like to pay \$50 for guaranteed minimums of 50 kbps data or someone else may want to pay \$100 per month for 384 kbps. The data profiles will be involved in decision-making, traffic, or service switching

process across different platforms and networks.

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For example, assume the current network receives a service request from a wireless device for multimedia services and the current cost of processing the request on the current network is outside the predetermined parameters for cost of service. In this case, the system will look to other platforms or other networks to process the request at a lower cost that falls within the predetermined parameters.

The factors outlined above are not meant to be limiting by any means. Quality of service relates to bandwidth and system capabilities. The cost of service relates to the cost of transmitting voice or data over a particular network at the present cost structure. The cost of service may relate to the charge to the subscriber or the cost to a service provider for the support and equipment to fulfill a subscriber obligation.

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Another variation on the second embodiment of the invention is shown in FIG. 8b. In this variation of the invention, it is assumed that the wireless device 12 is served by a 2G or 3G network (180) within the subscriber's home coverage area 66. A service request is received by the wireless device (182). The service provider checks the network load (184). The routine determines whether a predetermined load limit has been reached (186). If the load limit has not been reached, then the routine continues to service the wireless device 12 from the current network (190). If a predetermined load limit has been reached, then the routine determines whether another network can provide the requested service having overlapping coverage in the home service area (188).

If another network within the home service area 66 can provide the service, the other network can provide requested service, then the routine hands off the wireless device 12 to the other network capable of providing the requested service (192). If no, another network cannot provide the requested service, then the subscriber remains with the current home network to receive the requested service (190).

The step of choosing at least one network from the plurality of networks to provide services may be accomplished according to a variety of aspects of the second embodiment of the invention. For example, different networks will offer varying quality of service. E-mail services can tolerate high delay while streaming video must be serviced according to a minimum data rate and can tolerate only moderate delay. Voice services demand both a minimum data rate, at least while a person is speaking, and very low delay.

Therefore, when a high quality of service is required, the routine chooses a network that provides the necessary bandwidth to be able to fill the service requirement. The algorithm may make the decision on which network to choose based on the cost of the service or any other factor. A

particular user of a wireless device 12 may have cost restraints that have priority over bandwidth needs. In this regard, the process may choose a network primarily based on the cost of the services rather than bandwidth needed. In this regard, the decision making process may involve referencing a particular user profile to evaluate whether the predetermined parameters are met for a particular service request.

Guilford does not disclose or suggest **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”**

Since neither Ramasubramani nor Guilford teaches or discloses **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal,”** no combination of Ramasubramani and Guilford would disclose or suggest this claimed subject matter.

Furthermore, it is respectfully made of record that Ramasubramani is not amenable to modification to select between at least two networks. This is clear from column 15, lines 42-46, which discloses **“The appropriate airlink for the reply PDU is obtained from the session data which associates the airlink with the original source address which now corresponds to the target address for the reply PDU.”** Since Ramasubramani requires that the same airlink be used for receiving a reply to a request as is used to transmit the request, there can be no selection between at least two networks to the terminal device. Ramasubramani teaches away from the claimed invention and is not amenable to **“at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”**

Thus, all three independent claims – 54, 72, and 76 – and their dependent claims are not made obvious by Ramasubramani in view of Guilford.

Furthermore, claim 62 recites **“generating, at the agent, a search query to a content**

provider to obtain the requested user content, using a network, if an explicit link to the user content has not been provided.” Neither Ramasubramani (see column 3, lines 1-23, column 8, lines 20-36) nor Guilford are seen to teach or suggest this claimed subject matter.

Thus, claim 62 is allowable over Ramasubramani in view of Guilford for this additional reason.

The Patent Office rejected claims 55-58 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Guilford as applied to claim 54 above, and further in view of Wang, U.S. Published Patent Application No. 2002/0198946.

The Patent Office asserted that Ramasubramani in view of Guilford “does not explicitly disclose maintaining a log of sourced user content relating to the request.”

The Patent Office then asserted that “Wang teaches a content delivery system where a log is maintained in relation to sourced user content. The log includes an indication of delivery status for the user content (Paragraphs 81-85).”

Wang, in paragraphs 0081-0085, discloses as follows:

[0081] As previously mentioned, each category has a delivery mode associated with it. If a category is assigned delivery mode A 902, then delivery mode A 902 is assigned to all alerts associated with the category. Delivery of alerts associated with delivery mode A 902 will be made via the delivery action(s) included in the primary delivery block 907, i.e., the first delivery action 909. It is noted that the alerts will also be delivered via any other designated delivery actions--if present--included in the primary delivery block 907.

[0082] The first delivery action 909 of the primary delivery block 907 indicates that an alert assigned to delivery mode A 902 will be delivered by IM to address IMName 1(918). The first delivery action 909 also indicates in an acknowledgment field 920 that an acknowledgement to the response is expected. A time to wait field 922 has the value of 10 (ten), indicating that if an acknowledgement to the alert is not received within ten minutes, the alert delivery is deemed to have failed. As shown in this example, the default time unit is minutes, though a user may set a default time unit to seconds, hours, days, etc.

[0083] If the alert delivery fails according to the delivery action(s) 909 of the primary delivery block 907, then the alert will be delivered according to the delivery action(s) 910 of the secondary delivery block 908. The first delivery action 910 of the secondary delivery block 908 indicates that, in the event that the alert was not successfully delivered according to the primary delivery block 907, the alert will be delivered by SMS to address

SMSName1 (924). An acknowledgement field 926 in the first delivery action 910 of the secondary delivery block 908 indicates that an acknowledgment to this alert is expected, and a time to wait field 928 indicates that if the acknowledgement is not received within thirty (30) minutes, then the alert delivery via the first delivery action 910 (of the secondary delivery block 908) is deemed to have failed.

[0084] In the present example, the delivery modes module 900 also includes delivery mode B 904. Delivery mode B 904 only includes a primary delivery block 911. The primary delivery block 911 includes a first delivery action 912 and a second delivery action 914. Alerts associated with delivery mode B 904 will be delivered according to both the first delivery action 912 and the second delivery action 914.

[0085] The first delivery action 912 indicates that an alert assigned to delivery mode B 904 will be delivered by IM to address IMName2 (930). An acknowledgement field 932 in the first delivery action 912 indicates that an acknowledgment to this alert is expected, and a time to wait field 934 indicates that if the acknowledgement is not received within ten (10) minutes, then the alert delivery via the first delivery action 912 is deemed to have failed.

Wang discloses a personal centralized alert delivery system. In paragraph 0092, Wang discloses “The categorization of the alert may be according to the source of the alert, the content of the alert, the source and the content, or any other feature of the alert that may be used to classify alerts for priority distribution.” Wang discloses, in claim 8, “defining one or more categories of alerts” and “assigning a delivery mode to each category.”

Wang does not disclose or suggest **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”**

Since none of Ramasubramani, Guilford, or Wang teaches or discloses **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal,”** no combination of Ramasubramani, Guilford, or Wang would disclose or suggest this claimed subject matter.

Thus, claims 55-58 are not made obvious by Ramasubramani in view of Guilford and

further in view of Wang.

The Patent Office rejected claim 59 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Guilford as applied to claim 54 above, and further in view of Tamura, U.S. Published Patent Application No. 2002/0023092.

The Patent Office asserted that Ramasubramani in view of Guilford “does not explicitly disclose notifying over a duplex network prior to delivery of the user content over a simplex network.”

The Patent Office then asserted that “Tamura teaches the use of a duplex and simplex network for delivering content to a user. This includes notifying over a duplex network prior to delivery of content over a simplex network (See abstract and paragraphs 52-53).”

Tamura, in the abstract and paragraphs 0052-0053, discloses as follows:

An information delivery system includes an information delivery apparatus installed at a sales company and receiver apparatuses installed at sales shops. A control unit generates program information data from stored program contents including catalog information, and generates delivery schedule information data based on stored delivery information. The program information data and the delivery schedule information data are transmitted by a broadband transmitter unit to the receiver apparatuses. The delivery schedule information is also transmitted to the receiver apparatuses, as required, via a narrowband communication path. In each receiver apparatus, a broadband receiver unit and a narrowband receiver unit receives the program information data and the delivery schedule information data, and the program contents are retrieved as desired and stored. A display unit displays the retrieved catalog information under the control of an information retrieval control unit.

[0052] In the receiver apparatus 200a, the broadband receiver unit 210 receives the program contents, the delivery information, and the browser program transmitted via the broadband communication path 300. The narrowband receiver unit 220 receives the delivery information delivered via the narrowband communication path 400. The information retrieval control unit 230 stores the received delivery information in the received data storage unit 240, determines whether the program contents be received with reference to the delivery schedule, and stores in the received data storage unit 240 program contents which is allowed to be received. The received browser program is stored in a predetermined area of the received data storage unit 240. The display unit 250 displays information in accordance with the program contents in the received data storage unit 240 under the control of the information retrieval control unit 230.

[0053] Because the information delivery apparatus 100 delivers the

delivery information together with the program contents, the receiver apparatus 200a is allowed to reserve in advance desired programs based on the delivery information and thereby not to receive undesired programs. Furthermore, because the delivery information is also transmitted via the narrowband communication path 400, the delivery information can be obtained even if it is not obtained via the broadband communication path 300, for example, due to weather conditions. The program contents are delivered via the broadband communication path 300, allowing delivery of multimedia information of large volume. In addition, the program contents can be received or not received as desired, decreasing the required capacity of the received data storage unit 240.

Tamura, in the abstract, discloses “A control unit generates program information data from stored program contents including catalog information, and generates delivery schedule information data based on stored delivery information.” In paragraph 0051, Tamura discloses “the contents of a plurality of programs are stored in the program content storage unit 110, the delivery information corresponding to each of the programs is stored in the delivery information storage unit 120, and browser programs are stored in the browser program storage unit 130.” In paragraph 0068, Tamura discloses changing a delivery schedule.

Tamura does not disclose or suggest **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time”** and **“at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”** Tamura, in the abstract, discloses that program information data and delivery information are transmitted via the broadband transmitter unit and the delivery information is also transmitted via the narrowband transmitter unit, but does not disclose selecting based on a set of user content delivery preferences between at least two networks. Paragraph 0064 of Tamura is suggestive that a receiver apparatus 200a transmits a request in the mode a response to the request is received; i.e., a narrowband request results in a narrowband reply, a broadband response results in a broadband reply.

Since none of Ramasubramani, Guilford, and Tamura teaches or discloses **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time”** and **“at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user**

content from the agent to the terminal,” no combination of Ramasubramani, Guilford, or Tamura would disclose or suggest this claimed subject matter.

Thus, claim 59 is not made obvious by Ramasubramani in view of Guilford and further in view of Tamura.

The Patent Office rejected claims 69, 73, and 77 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Guilford as applied to claim 54 above, and further in view of Mousseau, U.S. Published Patent Application No. 2002/0120696.

The Patent Office asserted that Ramasubramani in view of Guilford “does not explicitly disclose reducing power consumption of the wireless terminal by scheduling the timing of the delivery of the user content to limit an amount of time the wireless terminal is connected to the selected network.”

The Patent Office then asserted that “Mousseau teaches that scheduling the timing of delivery of information to a wireless terminal can reduce the power consumption of the wireless terminal in part by limiting the amount of time the terminal is connected to a network (Paragraph 114).”

Mousseau, in paragraph 0114, discloses as follows:

[0114] The method of continuous over-the-air-synchronization process is preferable; however, such continuous real-time synchronization has drawbacks when continuously (or frequently) transmitting data packets over the wireless network. Some of the drawbacks include (1) low bandwidth on the particular wireless network that the mobile device works with is not very robust to handle an overwhelming amount of data transfers, (2) higher costs for the service provider, user or both are generally associated with such frequent data exchanges and (3) heavier power usage on the mobile device's power source may prematurely drain the power resources of the mobile device. Therefore, it may be desirable to (1) switch the over-the-air-synchronization feature off and to leave synchronization of information organization until device-host synchronization through the wired interface cradle or (2) leave the option to the user to switch on the feature for a period of time until switched off by the user or after the expiration of predetermined period of time. In another embodiment of the present invention, the mobile device 24 bundles together and preferably compresses the various synchronizations, move commands (or other operations) created during the day and transmits the bundled information as one or more data packet transmissions during non-peak network usage or transmission times.

Preferably, the bundling and the optional compression step reduces the number of data packets to be sent over the wireless network. At the host system, the redirector component receives, unbundles and appropriately acts on the information. Advantageously, this store, delay and transmit method reduces the power requirements for the mobile device thereby conserving the power store of the mobile device and may be used for any type of data item or certain types of data items. For example, the device may do the automatic over-the-network continuous transmission of emails and calendar events from the device, but delay the transmission of folder moves until non-peak times or alternatively, delay communication of such changes until a physical synchronization occurs.

Mousseau relates to a redirector software program as “a preferred component of the overall system that facilitates mirroring of data store folders between a host system and a mobile device” (paragraph 0061). In paragraph 0067, Mousseau discloses “A user of the present invention can configure the redirector program 12 to push certain user-selected data items to the user's mobile data communication device 24 when the redirector 12 detects that a particular user-defined event trigger (or trigger point) has taken place. User-selected data items preferably include E-mail messages, calendar events, meeting notifications, address entries, journal entries, personal alerts, alarms, warnings, stock quotes, news bulletins, etc., but could, alternatively, include any other type of message.”

Mousseau does not disclose or suggest **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.”**

Since none of Ramasubramani, Guilford, or Mousseau teaches or discloses **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal,”** no combination of Ramasubramani, Guilford, or Mousseau would disclose or suggest this claimed subject matter.

Thus, claims 69, 73, and 77 are not made obvious by Ramasubramani in view of Guilford and further in view of Mousseau.

The Patent Office rejected claims 70 and 74 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Guilford as applied to claim 54 above, and further in view of Agnihotri, U.S. Published Patent Application No. 2003/0101150.

The Patent Office asserted that Ramasubramani in view of Guilford “does not explicitly disclose the set of user content delivery preferences further comprises a selection of at least one domain from which content is to be sourced.”

The Patent Office then asserted that “Agnihotri teaches a set of user content delivery preferences which includes a selection of at least one domain from which content is to be sourced (Paragraph 32). This allows the user to identify the preferred information sources most often relied upon for information.”

Agnihotri, in paragraph 0032, discloses as follows:

[0032] The dynamic profile also contains a source list 730 of preferred information sources, those on which the subscriber most often relies for information. Preferably, this list includes specific channels, such as radio and TV stations, and Web sites where certain types of information may be found. Alternately, it may include certain categories of information, such as sports scores, stock market quotes, and traffic reports. In either alternative, a time of day, day of the week, or event may also be specified, indicating when the particular information will be the most valuable to the subscriber. Along with each source of information in list 730 is stored the format or formats in which it is available. Some sources will include more than one, for example, a Web site may include text, HTML, and multimedia information, and a television station may include audio, video, and text (closed captioning) formats. Conversion programs 740 will sometimes, though not always be necessary to convert the incoming information from its original format to formats acceptable to the various communication devices, and these conversion programs may be stored on the database 700, as well. If audio output is preferred, the incoming text file may be converted to speech by text to speech conversion, or video signal may be reduced to just the audio portion. An IIDS control program 750 for directing the various IIDS operations described herein is preferably also resident in database 700.

Agnihotri discloses a GPS system and a schedule indication to determine a subscriber's location in a vehicle, paragraph 0042. In paragraph 0045, Agnihotri discloses “Subscriber delivery preferences may be included in the dynamic profile 710...” Paragraph 0050 of Agnihotri discusses the subscriber dynamic profile for personalized delivery.

Agnihotri does not disclose or suggest “**at an agent resident on a network element,**

establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.” As Agnihotri states in paragraph 0041 “Processor 800, as directed by control program 750, regularly monitors the current location of the subscriber and updates the dynamic profile 710 so that information will be sent to the correct communication device,” so Agnihotri is clearly not concerned with an agent selecting between at least two networks over which to deliver user content to a terminal. It is clear from Figure 5, as discussed in paragraphs 0048 and 0049, of Agnihotri that the multiple outputs of the selector depend on the technology used for communication with a corresponding one of multiple devices rather than for selecting one of at least two networks for delivering user content from the agent to the terminal.

Since none of Ramasubramani, Guilford, and Agnihotri teaches or discloses **“at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal,”** no combination of Ramasubramani, Guilford, or Agnihotri would disclose or suggest this claimed subject matter.

Thus, claims 70 and 74 are not made obvious by Ramasubramani in view of Guilford and further in view of Agnihotri.

The Patent Office rejected claims 80, 83, and 86 under 35 U.S.C. 103(a) as being unpatentable over Ramasubramani in view of Guilford as applied to claim 54 above, and further in view of Vogl, U.S. Patent No. 6,959,327.

Claims 80, 83, and 86 have been amended to recite “notifying a user of the wireless terminal to enable the user to override the delivery cost constraint.”

The Patent Office asserted that Ramasubramani in view of Guilford “does not teach in response to being unable to select a network that meets that delivery cost constraint, notifying a user of the wireless terminal to enable that user to one of override the delivery cost constraint or maintain the delivery cost constraint.”

The Patent Office then asserted that “Vogl teaches transmission requests associated with user defined constraints such as availability and pricing. If a transmission request with a specific

set of constraints cannot be met, the user is notified of the rejection and is allowed to resubmit alternative criteria or continue with the original criteria. This enables the overriding of the original delivery cost constraint by the user. See Col. 20 lines 3-24.”

Vogl, in column 20, lines 3-24, discloses as follows:

If the transmission request 700 for transmission is rejected by the acceptance process 139, the request receiver process 144 is notified (and optionally notifies the client 180) and a next request 700 is received. In a more preferred embodiment, the request receiver process 144 includes alternate transmission constraints 770 categorized by priority so that the acceptance process 139 can reject the transmission request 700 with one or more of the constraints 770 but accept the transmission request 700 with one of the other constraints 770. In an alternative preferred embodiment, the acceptance process 139 would reject the transmission request 700 but would return through the request receiver process 144 to the client 180 alternate criteria (e.g. transmission time availability and pricing) which is used in a negotiating process between the system 100 and the client 180 to come to an acceptable transmission constraints 770 for the transmission request 700. In another embodiment, the client 180 submits multiple transmission requests 700 with different transmission constraints 770, probably starting with the most constrained transmission request 700 first. The client 180 continues submitting transmission requests 700 until the system 100 accepts one.

Vogl, in column 5, lines 1-4, discloses an optional scheduling server that “runs a scheduler process 134, an acceptance process 139, a delivery status process 137, and, optionally, a billing process 136 and analysis process 138.” Vogl, in column 7, lines 35-44, discloses “a transmission decision list 200 data structure” and “transmission criteria 250 data structure contains the following fields: an index 205, a release time 210, a portion quantity 215, a duration 220, a burst size 225, a burst rate 230, a quantity completion measure 235, and a status code 240.” Vogl, in column 13, lines 5-11, discloses as follows: “When the release time 210 of the selected transmission criteria 250 has arrived (or has past), the dispatching process 600 checks for availability of bandwidth, step 625. A network use criteria record 550 is chosen from the network use criteria table 500, and the defined network usage 510 is compared against the aggregate amount of network usage 515 to determine a network resource availability.” In column 15, lines 17-22, Vogl discloses “By updating the history log 400, the dispatching process 600 can provide feedback to a scheduler (128, 134) so that it can dynamically reschedule transmissions

due to delays in the network or due to unexpected increases in network bandwidth.”

In column 17, lines 22-24, Vogl discloses “The client 180 indicates how the transmission should be charged through the billing account 730 and billing user 732 fields of the transmission request 700.” Vogl, in column 37, lines 13-20, discloses “Cost factors which relate to the transmissions of the data file 112A include: a priority based fee; network usage fees based on peak and off-peak transmission release times 742 and transmission deadlines 744; fees based on the amount of leeway between the transmission release time 742 and the transmission deadline 744; number of retransmissions requested (retransmission count 748); and the acknowledgments 760 requested.” In column 37, lines 34-37, Vogl discloses “If the estimated cost 1420 is greater than the billing cost 734, execution of the process 139 branches to step 1460 where an iteration of a next transmission constraint 770 is performed.” Vogl, in column 38, lines 4-16, in pertinent part, discloses “Step 1460 checks the transmission request 700 to see if it contains any transmission constraints 770 which have not yet been iterated over... the transmission request 700 is rejected and a rejection signal is sent to the client 180 by the request receiver process 144. The client 180 can then submit a new transmission request 700 with alternate transmission constraints 770.”

Vogl does not disclose or suggest “at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal.” The passage, in column 37, lines 34-37, where Vogl discloses “If the estimated cost 1420 is greater than the billing cost 734, execution of the process 139 branches to step 1460 where an iteration of a next transmission constraint 770 is performed” does not relate to selecting between at least two networks.

Since none of Ramasubramani, Guilford, and Vogl teaches or discloses “at an agent resident on a network element, establishing a set of user content delivery preferences relating to user content to be delivered at a future time” and “at the agent, selecting, based on at least the delivery cost, between at least two networks over which to deliver said user content from the agent to the terminal,” no combination of Ramasubramani, Guilford, or Vogl would disclose or suggest this claimed subject matter.

Furthermore, Vogl does not teach or suggest “notifying a user of the wireless terminal to enable the user to override the delivery cost constraint,” as recited by claims 80, 83, and 86.

Thus, claims 80, 83, and 86 are not made obvious by Ramasubramani in view of Guilford and further in view of Vogl.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 54-59, 61-66, and 69-86 under 35 U.S.C. 102(e) based on Ramasubramani in view of Guilford, whether or not further in view of Agnihotri, Wang, Tamura, Mousseau, and/or Vogl, and to allow all of the pending claims 54-59, 61-66, and 69-86 as now presented for examination. An early notification of the allowability of claims 54-59, 61-66, and 69-86 is earnestly solicited.

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Respectfully submitted:

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450.

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